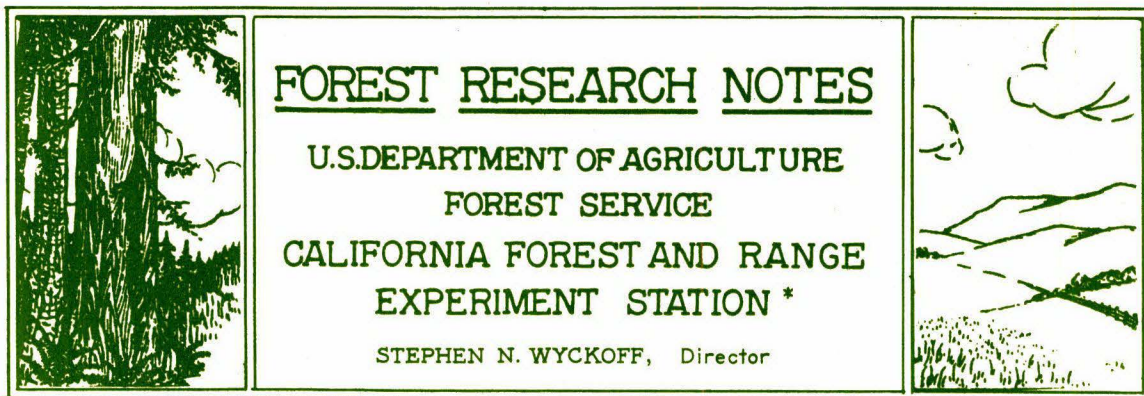


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Research Note No. 69

JUN 24 1968

June 1, 1950

ROCKY MOUNTAIN STATION

CHECK LIST FOR INSPECTION OF LUMBER DRY KILNS

By Harvey H. Smith, Forest Products Technologist

Lumber dry kilns are production machines that require careful attention and maintenance to keep them in good working order. Too often, too much is taken for granted regarding their general operating condition, and they fall into a state of disrepair that makes good drying difficult or outright impossible. This note suggests one type of check list that may be used as a guide for use by the kiln operator or other qualified person in making routine inspections of buildings and equipment. Management may also find this form useful in having inspections made and reported at regular intervals.

The need for such regular inspection was forcefully revealed by kiln certification studies of all types of kilns, made during the war by technicians from the Forest Products Laboratory, Madison, Wisconsin. Many kilns could not meet the established requirements because poor maintenance or faulty adjustment of kiln parts made accurate control of temperature and humidity impossible. This study provided the basis for the attached check list.

Periodic examination of the kiln building and kiln equipment may reveal faulty conditions that can be corrected immediately at little cost. Neglect of these conditions can lead to expensive repairs or replacements. For example, poor drying may result from as simple an oversight as failure to replace the wet-bulb wick regularly, thus allowing the old wick to become incrustated with debris that results in faulty humidity control. Lack of proper air baffles, either because of omission from the original installation or because of poor repair of existing equipment, may lead to greatly reduced air circulation through the loads of lumber. Leaks in the steam heating and spray systems may waste steam and necessitate excessive venting. Water-logged coils and traps may result in uneven heating throughout the kiln, which in turn will cause uneven drying. Such examples can be cited for most of the items listed in the check list.

KILN INSPECTION CHECK LIST

(Where maintenance or replacement is recommended, indicate kiln number.)

I. AIR CIRCULATION SYSTEM

1. Fans and motors, present condition: _____
Condition of electrical connections and switches: _____
What maintenance or replacement is recommended: _____
2. Shafts and bearings, present condition: _____
Are motor and shaft bearings properly lubricated: _____
What maintenance or replacement is recommended: _____
3. Fan baffles, present condition: _____
What maintenance or replacement is recommended: _____
4. Load baffles, present condition: _____
Can load baffles be improved: _____
What maintenance or replacement is recommended: _____
5. Air passageways
Are air passageways open and unobstructed: _____
Could air movement be improved: _____
What maintenance or replacement is recommended: _____

II. HEATING AND HUMIDIFYING SYSTEM

1. Feed lines and header, present condition: _____
Are they properly insulated: _____
What maintenance or replacement is recommended: _____
2. Heating coils, present condition: _____
Are all pipes open to full flow of steam: _____
Condition of supports: _____
What maintenance or replacement is recommended: _____
3. Traps, present condition: _____
Are traps in best possible location: _____
What maintenance or replacement is recommended: _____
4. Hand valves and automatic control valves, present condition: _____
Are hand valves provided for blowing out coils: _____
Are hand valves provided for shutting off individual coils: _____
Are check valves working properly: _____
What maintenance or replacement is recommended: _____
5. Spray lines, present condition: _____
Are spray holes or nozzles open: _____
Does condensate from spray line drip on lumber: _____
What maintenance or replacement is recommended: _____

(over)

II. HEATING AND HUMIDIFYING SYSTEM (continued)

6. Vents, present condition:

Do vents open and close properly: _____

What maintenance or replacement is recommended: _____

III. CONTROL SYSTEM

1. Recorder-controller, present condition:

Is recorder-controller properly calibrated: _____

Are capillary tubes protected: _____

Are bulbs properly located and mounted for accurate readings of kiln conditions: _____

What maintenance or replacement is recommended: _____

2. Water supply

Is water supply line to wet bulb open: _____

Is wet-bulb water pan clean: _____

Is drain line from water pan open: _____

Is wet-bulb wick replaced regularly: _____

What maintenance or replacement is recommended: _____

3. Air supply

Is supply adequate, clean, and uninterrupted: _____

Is compressor in good condition: _____

Are water and grease traps in good condition: _____

What maintenance or replacement is recommended: _____

IV. BUILDING

1. Doors, present condition:

What maintenance or replacement is recommended: _____

2. Walls, present condition:

Is protective coating adequate: _____

What other maintenance is recommended: _____

3. Ceilings, present condition:

Is protective coating adequate: _____

What other maintenance is recommended: _____

4. Floors and walkways, present condition:

What maintenance or replacement is recommended: _____

5. Rails and supports, present condition:

What maintenance or replacement is recommended: _____

V. GENERAL CONDITIONS OF YARD AND KILNS

Are yard tracks and transfer in good condition: _____

Are kiln trucks in good condition: _____

What maintenance or replacement is recommended: _____

Are kilns and surrounding area neat and clean: _____